



UNITED STATES PATENT AND TRADEMARK OFFICE

li
UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/706,839	11/12/2003	Taner Dosluoglu	DSR14446	6930
7590	09/14/2005		EXAMINER	
STEPHEN B. ACKERMAN 28 DAVIS AVENUE POUGHKEEPSIE, NY 12603			WEISS, HOWARD	
			ART UNIT	PAPER NUMBER
			2814	

DATE MAILED: 09/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/706,839	DOSLUOGLU, TANER	
	Examiner	Art Unit	
	Howard Weiss	2814	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 08 July 2005.
 2a) This action is **FINAL**. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-34 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) 1-34 is/are rejected.
 7) Claim(s) _____ is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) Notice of References Cited (PTO-892)
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
 Paper No(s)/Mail Date _____.
 4) Interview Summary (PTO-413)
 Paper No(s)/Mail Date _____.
 5) Notice of Informal Patent Application (PTO-152)
 6) Other: _____.

Attorney's Docket Number: DSR14446

Filing Date: 11/12/03

Continuing Data: Claims benefit of 60/450,089 (2/26/03)

Claimed Foreign Priority Date: none

Applicant(s): Dosluoglu

Examiner: Howard Weiss

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1 to 17 are rejected under 35 U.S.C. 102(b) as being anticipated by Iwanami et al. (U.S. Patent No. 4,906,856).

Iwanami et al. show all aspects of the instant invention (e.g. Figure 2a) including:

- a p type silicon substrate 1
- an N well 3 form in said substrate and a P well 5 formed in said N well
- a deep N well 2 formed beneath said P well
- an overlap region formed between said N well and said deep N well providing electrical communication between these two wells
- a first 8 and second 8' N regions formed in said P well and a P region 4 formed in said N well
- all part of an active pixel array (e.g. Figure 3)

In reference to the claim language referring to how the overlap regions reacts to potential changes (re. depleted charge carries during a charge integration period), intended use and other types of functional language must result in a structural difference between the claimed invention and the prior art in order to patentably

distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. *In re Casey*, 152 USPQ 235 (CCPA 1967); *In re Otto*, 136 USPQ 458, 459 (CCPA 1963).

In reference to the claim language pertaining to how the overlap region reacts to either the depletion or non-depletion of charge carriers, the claiming of a new use, new function, or unknown property which is inherently present in the prior art does not necessarily make the claim patentable. *In re Best*, 195 USPQ 430, 433 (CCPA 1977) and *In re Swinehart*, 439 F. 2d 210, 169 USPQ 226 (CCPA 1971); please see MPEP § 2112. Since Iwanami et al. show all the features of the claimed invention, how the overlap region reacts to either the depletion or non-depletion of charge carriers is an inherent property of Iwanami et al.'s invention.

3. Claims 18 to 34 are rejected under 35 U.S.C. 102(b) as being anticipated by Watanabe et al. (U.S. Patent No. 6,023,293).

Watanabe et al. show all aspects of the instant invention (e.g. Figures 2 and 11) including:

- a n type silicon substrate 100
- an P well 120 form in said substrate and a N well 140 formed in said P well
- a deep P well 110 formed beneath said N well
- an overlap region formed between said P well and said deep P well providing electrical communication between these two wells
- a first 142 and second 143 P regions formed in said N well and a N region 26 formed in said N well
- all part of an active pixel array (e.g. Figure 19)

In reference to the claim language referring to how the overlap regions reacts to potential changes (re. depleted charge carries during a charge integration period), intended use and other types of functional language must result in a structural difference between the claimed invention and the prior art in order to patentably

distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. *In re Casey*, 152 USPQ 235 (CCPA 1967); *In re Otto*, 136 USPQ 458, 459 (CCPA 1963).

In reference to the claim language pertaining to how the overlap region reacts to either the depletion or non-depletion of charge carriers, the claiming of a new use, new function, or unknown property which is inherently present in the prior art does not necessarily make the claim patentable. *In re Best*, 195 USPQ 430, 433 (CCPA 1977) and *In re Swinehart*, 439 F. 2d 210, 169 USPQ 226 (CCPA 1971); please see MPEP § 2112. Since Watanabe et al. show all the features of the claimed invention, how the overlap region reacts to either the depletion or non-depletion of charge carriers is an inherent property of Watanabe et al.'s invention.

Response to Arguments

4. Applicant's arguments filed 7/8/05 have been fully considered but they are not persuasive. The Applicant state that both Iwanami et al. and Watanabe et al. do not describe an overlap region which can be depleted in order to accumulate charge in a deep well during a charge integration period. However, as explained in the rejections above, functional claim language must result in a structural difference between the invention as claimed and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. The three regions claimed, the well, the deep well and the overlap, are only structurally distinctive by the proximity to each other. Even in the specification (e.g. Figure 1 and Page 6 Lines 4 to 22), these regions physically blend into each other and only become further distinctive during operation of the semiconductor device. There is nothing in the prior art which restricts the use of the devices in the prior art from operating as described in the Specification.

In response to applicant's arguments, the recitation of the device being an active pixel sensor has not been given patentable weight because the recitation occurs in

the preamble. A preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951).

Because of these reasons and those stated in the present office action, the stated claims remain rejected.

Conclusion

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

6. Papers related to this application may be submitted directly to Art Unit 2814 by facsimile transmission. The faxing of such papers must conform with the notice published in the Official Gazette, 1096 OG 30 (15 November 1989). The Art Unit 2814 Fax Center number is **(571) 273-8300**. The Art Unit 2814 Fax Center is to be used only for papers related to Art Unit 2814 applications.

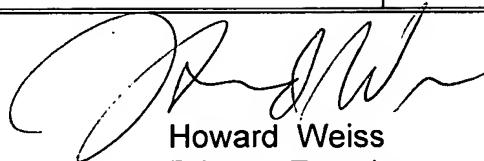
Art Unit: 2814

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Howard Weiss at **(571) 272-1720** and between the hours of 7:00 AM to 3:00 PM (Eastern Standard Time) Monday through Friday or by e-mail via Howard.Weiss@uspto.gov. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wael Fahmy can be reached on **(571) 272-1705**.

8. The following list is the Examiner's field of search for the present Office Action:

Field of Search	Date
U.S. Class / Subclass(es): 257/291, 293, 371	Thru 9/9/05
Other Documentation: none	
Electronic Database(s): EAST	Thru 9/9/05

HW/hw
9 September 2005



Howard Weiss
Primary Examiner
Art Unit 2814